



Original research article

Contraceptive method use in the United States: trends and characteristics between 2008, 2012 and 2014

Megan L. Kavanaugh*, Jenna Jerman

Guttmacher Institute, 125 Maiden Lane, 7th Floor, New York, NY 10038

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Abstract

Objective: The objective was to examine levels of, correlates of and changes in the use of individual and grouped methods of contraception among US females aged 15–44 from 2008 to 2014.

Study design: Using three rounds of the National Survey of Family Growth, we analyzed samples of 12,279 (2008), 5601 (2012) and 5699 (2014) females. We conducted simple and multivariable logistic regression analyses to identify associations between demographic characteristics and contraceptive use, as well as between characteristics and changes in use patterns.

Results: In terms of overall trends in contraceptive use between 2008 and 2014, there was no significant change in the proportion of women who used a method among either all women (60%) or those at risk of unintended pregnancy (90%). Significant changes in use occurred among six methods. The largest increase in use was among users of long-acting reversible contraceptive (LARC) methods, including the intrauterine device and implant — from 6% to 14% — across almost all population groups of female contraceptive users, while the largest decrease occurred among users of sterilization — from 37% to 28% — with lower-income women driving the decline in female sterilization and higher-income women driving the decline in a partner's sterilization as a primary method. Moderate increases were seen in the use of withdrawal and natural family planning.

Conclusion: Most shifts in recent contraceptive use have occurred among the most effective methods — sterilization and LARCs. Differences in method-specific user characteristics underscore the importance of ensuring full access to the broad range of methods available.

Implications: The lack of change in the overall use of contraceptives among women at risk for unintended pregnancy may have implications for the extent to which further declines in national rates of unintended pregnancy can be expected.

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Keywords: Contraceptive use; National Survey of Family Growth; Method mix; Unintended pregnancy; United States

1. Introduction

Surveillance of contraceptive method use in the United States is important for several reasons. First, the rate of unintended pregnancy declined 18% between 2008 and 2011, from 54 per 1000 women aged 15–44 to 45 per 1000 [1]. Available evidence suggests that more effective contraceptive use over time — more consistent and correct use of methods, increased proportions of users switching to more effective methods or both — may have contributed to recent declines in unintended pregnancy [1]. There is evidence of both of these trends in prior reports of method use among all US women. Between 2007 and 2012, the

overall proportion of women using contraception remained the same, while the percentage of contraceptive users using the most effective and long-acting reversible methods, including the intrauterine device (IUD) and implant, increased from 4% to 12% [2–5]. There is also new evidence that contraceptive failure rates have improved, which could mean that methods are being used more consistently and correctly [6].

Second, 95% of unintended pregnancies occur among women who either use their method inconsistently or incorrectly, or use no method at all [7]. Observing trends in and patterns of contraceptive use, nonuse and method type in the population, as well as associated user characteristics, improves our understanding of unintended pregnancy risk in the United States. Additionally, surveillance may help elucidate how behaviors and method preferences change

* Corresponding author. Tel.: +1 646 438 8725; fax: +1 212 248 1951.
E-mail address: mkavanaugh@guttmacher.org (M.L. Kavanaugh).

over time within changing policy and societal contexts. This information may be used to inform clinical guidelines for method provision and patient education and to address barriers to use and access.

Third, a better understanding of the mix of methods currently being used may offer insight into enabling autonomy in method choice for women to access and use the method that best suits their needs. Although long-acting reversible contraceptive (LARC) methods such as the IUD and implant have received considerable attention in recent years [8,9], patient-centered models of care underscore the need to understand LARC use within the broader mix of all methods used. Ongoing research is needed to assess trends among all methods, specifically examining the intersection of economic and policy factors on method choice and access. For example, while research has shown that women use and discontinue select methods based on features of those methods, including side effects, effectiveness and ease of use [10,11], method use is also constrained by access to and quality of family planning services and the legacy of discrimination in health care settings [12–15]. Given the implementation of the Affordable Care Act (ACA) in 2013 as well as subsequent challenges to health care reform, efforts to understand contraceptive use in the changing health care and insurance environment are also timely.

This study focuses on use of contraception overall as well as individual method use and examines short- and long-term changes in trends, highlighting the changes between 2008 and 2014 for longer-term changes and between 2012 and 2014 to understand change in the context of the ACA implementation. We assess changes in method use among all contraceptive users by demographic characteristics between 2008 and 2014 and characteristics associated with use of specific methods in 2014.

2. Methods

Data for this cross-sectional, descriptive study come from the female respondent files of the 2006–2010, 2011–2013 and 2013–2015 National Surveys of Family Growth (NSFGs). The NSFG uses a multistage probability sampling design that oversamples Black and Hispanic groups and teenagers aged 15–19. These in-home, face-to-face interviews of men and women aged 15–44 in the household population of the United States, including persons temporarily living away from the household in a college dormitory, sorority or fraternity, provide the most comprehensive nationally representative information available on contraceptive use in the United States. More detailed information on survey methodology, sample design, response rates, fieldwork procedures and variance estimation is published elsewhere [16], and the data are deidentified and publicly available for download on the NSFG website (<http://www.cdc.gov/nchs/nsfg.htm>). Institutional review board approval was not required for this analysis of secondary data.

Weights were available for both of the 2-year periods of interviews spanning 2011–2015, that is, September 2011 to September 2013 and September 2013 to September 2015. Analyses are presented using the midpoint of each time period as the reference year (2008, 2012 and 2014). The samples are made up of 12,279 (2006–2010), 5601 (2011–2013) and 5699 (2013–2015) females aged 15–44.

We examined use of specific and grouped methods and nonuse, as well as changes in the mix of methods used, between 2008 and 2014 for longer-term changes and between 2012 and 2014 to assess changes in the context of ACA implementation. Because there was no change over time in the proportion of women at risk of unintended pregnancy who were not using a method, we focus primarily on prevalence and change in method use among contraceptive users rather than among all women at risk of unintended pregnancy [a]. Current contraceptive use is defined as the use of any contraceptive method during the month of the interview based on the CONSTAT1 recode in the NSFG dataset. Of note, this analysis presents the primary method used for pregnancy prevention, as determined by the most effective method reported, rather than taking into account possible multiple methods used. Specific methods included in this analysis include female and male contraceptive sterilization; IUD; implant; pill; other hormonal methods such as the ring, patch or injectables; condom; withdrawal; natural family planning methods and other coital methods (diaphragm, foam, sponge, suppositories and jelly). Following guidelines published by the Centers for Disease Control and Prevention, we grouped methods according to effectiveness and also included a summary group of “most or moderately effective methods,” including LARCs, pills and other hormonals, in the calculation of overall trends in use [17]. Respondents who indicated that they were sterile by nonsurgical or noncontraceptive surgical means were omitted from this analysis.

Independent variables include demographic and sexual and reproductive health characteristics that may be associated with contraceptive method use. Characteristics include age, race and ethnicity, income as a percentage of the federal poverty level, nativity, relationship status, education, health insurance coverage, parity and number of future births expected.

For each of the three time points, we tabulated three sets of statistics: first, the proportion of all women who used any method; second, the proportion of all women at risk of unintended pregnancy who used any method; and third, the proportion of all contraceptive method users by method type. To examine change in use over time, we merged the three

^a We also ran all trend analyses in Tables 1 and 2 among women at risk of unintended pregnancy (women who had had sexual intercourse in the 3 months prior to interview who were not pregnant or trying to conceive and women who were not sterile for noncontraceptive reasons) and found few differences in findings between this population and among contraceptive users, further supporting our decision to focus on contraceptive users as our population of interest for Tables 1–3.

data sets and weighted each time period accordingly. We then used bivariate logistic regression to test for significant differences in the proportions of use of contraception overall and of individual methods between 2008 and 2014 and between 2012 and 2014 to demonstrate both long- and short-term trends.^b Next, we tabulated the proportion of all contraceptive users by selected characteristics in 2008 and 2014 and used logistic regression to test for significant differences between the two reference years for all population groups. For methods for which significant changes in use occurred between 2008 and 2014, we present significant differences in use by characteristics between the two time points at $p < .05$ in the tables, but for the more detailed analyses examining characteristics associated with method use, we describe only those findings that were significant at $p < .01$ in the text.

For each individual contraceptive method, we used multivariable logistic regression to estimate adjusted odds ratios for the relationship between demographic and sexual and reproductive health characteristics and current contraceptive method use among all contraceptive users in 2014 in order to understand factors that influence use when controlling for multiple simultaneous characteristics. Each model began with all independent variables; after each iteration of a backward stepwise elimination process, we conducted Wald tests for each independent variable at $p > .1$ in the full model to determine if its inclusion affected the model. If the Wald test was not significant at $p < .05$, the variable was omitted from the model. All multivariable models included age, race/ethnicity and poverty status regardless of significance due to their theoretical relevance to the models. Age categories were consolidated for the multivariable models due to insufficiently large cell sizes. Online supplemental tables present these same findings for the remaining methods for which there was no significant change in use between 2008 and 2014.

All analyses were conducted using the “svy” command prefix within Stata 14.1 to account for the NSFG’s use of a multistage probability sample.

3. Results

Between 2008 and 2014, there were no significant changes in the overall proportion of women who used a contraceptive method both among all women and among women at risk of unintended pregnancy (Table 1). During this time period, approximately 60% of all women were currently using some form of contraception, and approximately 90% of women at risk of unintended pregnancy were using one. There were, however, some notable changes in the types of methods used among women using some form of

contraception during 2008–2014. The largest increase occurred among LARC users; only 6% of women using contraception used an IUD or implant as their primary method in 2008, but this increased to 12% in 2012 and 14% in 2014. Simultaneously, the largest decreases were seen in the use of sterilization, including both male and female sterilization, declining from 37% of all users in 2008 to 28% in 2014. More moderate increases occurred in use of withdrawal and natural family planning during this time period. Within larger groupings of methods by effectiveness, most of the trends in use between 2008 and 2014 were echoed in the most recent time period from 2012 to 2014, with the exception of a significant increase in the use of all coital methods, which occurred only in the most recent time period from 2012 to 2014 and was driven largely by an increase in withdrawal as a primary method and a parallel decrease in the group of most or moderately effective methods from 2012 to 2014. Over the full time period from 2008 to 2014, the top three most common methods among contraceptive users have remained the pill, female sterilization and the condom, but the IUD supplanted male sterilization as the fourth most common method in 2014.

Significant changes in the use of individual methods between 2008 and 2014 have been driven in part by changes in contraceptive use among specific demographic subgroups over time (Table 2). Decreases in the use of female sterilization were driven primarily by decreases in use among women who were ages 25–29, were non-Hispanic Black, had lower income, and were not married or cohabiting. Decreases in overall use of male sterilization (by a partner) occurred primarily among women who were ages 25–29, were non-Hispanic white, had the highest income, were married, were more educated, were covered by private insurance, had given birth to 1 or 2 children, and expected no future births.

Significant increases in use of the IUD and implant, on the other hand, occurred across almost all populations of women regardless of characteristic. Increases in the use of withdrawal occurred among women who were between the ages 25 and 29, were non-Hispanic white, had high income, were cohabiting, had the highest education, were using private insurance, had had 1–2 births and expected no future births. Small increases in the overall use of natural family planning over time were driven primarily by women ages 25–29, born in the United States, who had never given birth and who expected 1 to 2 future births.

In multivariable analyses adjusting for key demographic and sexual and reproductive health indicators in 2014, predictors of method use differed depending on the specific method (Table 3). The strongest predictors of female sterilization use were increasing age and parity, while lower levels of female sterilization were associated with higher income levels and increased education. Older women and women with higher incomes had increased odds of relying on their partner being sterilized, and nonmarried women were less likely to do so. Women with higher education levels and who had given birth had increased odds

^b We used logistic regression rather than t tests to test differences in contraceptive use over time due to the smaller standard errors achieved with the former approach.

Table 1

Trends in contraceptive use and method mix between 2008, 2012 and 2014 among all women ages 15–44, women at risk of unintended pregnancy and contraceptive users

	2008 (n=12,279 weighted n=61,754,741)	2012 (n=5601 weighted n=60,887,363)	2014 (n=5699 weighted n=61,491,766)	% point change 2012–2014	p value 2012–2014	% point change 2008–2014	p value 2008–2014
Among all women							
Currently using a method	62.2	61.7	61.4	–0.3	.843	–0.7	.558
Not using a method	37.8	38.3	38.6	0.3	.843	0.7	.558
Among women at risk of unintended pregnancy ^a							
Currently using a method	89.0	90.0	89.6	–0.5	.607	0.6	.539
Not using a method	11.0	10.0	10.5	0.5	.607	–0.6	.539
Among contraceptive users, percent using each method							
Most or moderately effective methods	76.6	77.9	74.4	–3.5	.028	–2.2	.107
Sterilization	36.6	33.3	28.2	–5.1	.013	–8.4	<.001
Female sterilization	26.6	25.1	21.8	–3.4	.093	–4.8	.008
Male Sterilization	10.0	8.2	6.5	–1.7	.068	–3.6	<.001
LARC methods	6.0	11.6	14.3	2.7	.042	8.3	<.001
IUD	5.6	10.3	11.8	1.5	.231	6.2	<.001
Implant	0.5	1.3	2.6	1.2	.012	2.1	<.001
Moderately effective hormonal methods	34.0	33.0	31.8	–1.1	.537	–2.1	.165
Pill	27.5	25.9	25.3	–0.5	.774	–2.1	.191
Other hormonal methods (patch, ring, injectables)	6.5	7.1	6.5	–0.6	.458	0.0	.982
Coital methods	23.0	21.7	25.1	3.3	.036	2.1	.131
Condom	16.3	15.3	14.6	–0.7	.603	–1.8	.142
Withdrawal	5.2	4.8	8.1	3.2	<.001	2.9	.001
Natural family planning	1.1	1.4	2.2	0.8	.058	1.0	.009
Other methods ^b	0.4	0.4	0.6	0.3	.270	0.2	.416

Survey years in column headings represent the midpoint of data collection years for each of the three NSFG surveys. **Bold** p values represent significant differences at p<.05 between the tested years.

^a Women at risk of unintended pregnancy include women who had had sexual intercourse in the 3 months prior to interview, women who were not pregnant or trying to conceive and women who were not sterile for noncontraceptive reasons.

^b Other methods include the diaphragm, foam, sponge, suppositories, jelly/cream and “other methods” as indicated by the CONSTAT1 variable in the NSFG documentation.

of being IUD users, while ages 35 and older were associated with lower levels of IUD use. Older ages were associated with decreased odds of implant use in 2014 as compared to women ages 15–24.

Being in the highest income bracket, being born outside of the United States, cohabiting, having at least a high school level education and expecting 1–2 future children were all associated with increased likelihood of using withdrawal as one’s primary method. Women ages 35 and older and those who expected to have 3 or more (additional) births had increased odds of using natural family planning methods, while those who were not married or cohabiting had decreased odds.

4. Discussion

Over the past decade, shifts in the use of contraceptive methods have occurred, including changes in the methods being used as well as in the characteristics of method users. Although overall use did not change between 2008 and 2014 and 90% of women at risk of unintended pregnancy are using some form of contraception, shifts in the mix of methods used have likely played a role in the decreasing rates of unintended pregnancy and abortion at the national level [1,18].

The increase in the use of the IUD and implant has not paralleled a decrease in nonuse of contraception, indicating that the majority of this increase can be attributed to women who were already contraceptive users changing methods. The increase in LARC use also parallels a decrease in sterilization. For the most part, women are changing method type within the group of most or moderately effective methods and not shifting from less effective to more effective methods, with the notable exception of the increase in withdrawal during this time period.

Withdrawal is in the lowest tier of effectiveness of methods, suggesting that some women (especially women with higher incomes and those born outside of the United States) may be prioritizing other factors — such as autonomy, user control over one’s method or sexual acceptability — over effectiveness when selecting a method that is best for them [19,20]. Although these women are at risk of unintended pregnancy, they may be more ambivalent about becoming pregnant [21] or they may have greater resources available to them to manage an unintended pregnancy should one occur. Increased attention in the popular media on withdrawal over the past few years may also be contributing to higher rates of reporting this as a pregnancy prevention method [22,23].

Table 2

Percentage of current contraceptive users by method and selected user characteristics, 2008–2014, and significant differences between years from logistic regression among US women ages 15–44

	Female sterilization			Male sterilization			IUD			Implant			Withdrawal			Natural family planning		
	2008		p	2008		p	2008		p	2008		p	2008		p	2008		p
	%	2014		%	2014		%	2014		%	2014		%	2014		%	2014	
Total	27	22	.01	10	6	<.01	6	12	<.01	0.5	3	<.01	5	8	<.01	1	2	<.01
Age																		
15–19	0.1	0	NA	0.1	0	NA	3	4	.59	0.3	6	<.01	7	4	.10	0.3	0	NA
20–24	3	2	.62	1	1	.84	6	13	<.01	1	6	<.01	6	9	.08	0.3	1	.03
25–29	16	10	<.01	4	1	<.01	7	15	<.01	1	4	.01	6	12	<.01	1	4	<.01
30–34	30	28	.49	10	5	.04	7	15	<.01	0.2	1	.23	5	6	.26	2	2	.70
35–39	37	32	.17	17	11	.03	6	14	<.01	0.4	0.4	.94	5	10	.05	2	2	.55
40–44	51	46	.23	20	16	.23	3	7	.01	0.0	0.3	NA	3	6	.11	1	3	.28
Race/ethnicity																		
White, non-Hispanic	24	21	.22	13	8	<.01	6	11	<.01	0.3	2	<.01	5	8	<.01	1	2	.01
Black, non-Hispanic	37	25	<.01	2	2	.68	5	12	<.01	1	3	<.01	4	7	.13	1	2	.09
Other or multiple races, non-Hispanic	24	19	.32	5	7	.64	4	11	<.01	2	3	.68	8	11	.48	2	4	.14
Hispanic	32	25	.06	6	4	.50	7	15	<.01	0.3	3	<.01	6	8	.11	2	1	.13
Poverty status																		
<100% federal poverty level	40	33	.04	2	1	.38	5	12	<.01	1	4	<.01	5	5	.53	1	2	.05
100%–199%	32	24	<.01	7	5	.35	6	13	<.01	1	2	.07	6	8	.26	2	1	.33
200%–299%	27	19	.06	11	6	<.01	5	13	<.01	1	3	.02	5	9	.05	1	3	.06
300% or higher	16	14	.29	16	11	.01	6	10	<.01	0	2	<.01	5	10	<.01	1	3	.04
Born outside the United States																		
No	27	22	.01	11	7	<.01	5	12	<.01	1	3	<.01	5	7	.01	1	2	<.01
Yes	26	23	.33	7	3	.04	8	11	.17	0.3	2	<.01	7	13	.01	3	3	.91
Relationship status																		
Married	30	27	.29	17	12	<.01	7	12	<.01	0.3	1	.03	6	9	.02	2	3	.01
Cohabiting	24	20	.13	4	2	.16	6	15	<.01	1	3	<.01	6	13	<.01	1	2	.81
Not married or cohabiting	22	16	<.01	2	2	.59	3	10	<.01	1	4	<.01	4	5	.55	0.3	1	.03
Education																		
No high school diploma	38	33	.12	3	1	.12	4	9	.02	0.3	6	<.01	7	4	.08	1	1	.53
High school or GED	37	31	.07	10	4	<.01	6	10	<.01	0.2	3	<.01	5	10	.01	1	2	.28
Some college	23	19	.07	10	8	.22	6	15	<.01	1	2	.07	5	8	.01	1	2	.07
College graduate	13	13	.98	15	9	<.01	6	12	<.01	0.2	1	.05	4	8	<.01	2	3	.24
Current insurance coverage																		
Private	22	17	.03	14	9	<.01	5	11	<.01	0.3	1	<.01	5	9	<.01	1	2	.06
Medicaid	37	30	.03	2	2	.58	8	13	.02	0.4	5	<.01	5	6	.25	1	2	.31
Other	23	25	.78	14	13	.88	7	7	.89	0.0	4	NA	5	2	.20	0.3	0.0	NA
None	35	29	.03	3	2	.29	7	13	<.01	1	5	<.01	8	9	.47	2	4	.12
Parity																		
0	2	1	.10	3	2	.26	1	6	<.01	0.3	3	<.01	6	8	.17	0.5	2	<.01
1–2	26	22	.05	15	9	<.01	10	18	<.01	1	3	<.01	5	9	<.01	1	3	.02
3 or more	60	54	.10	11	9	.37	5	10	<.01	0.4	1	.18	4	7	.08	2	1	.28
Number of future births expected																		
0	44	39	.03	16	11	<.01	5	13	<.01	0.4	2	.01	4	7	<.01	1	2	.26
1–2	0	0	NA	1	0.2	.08	7	12	<.01	1	4	<.01	7	11	.03	1	2	<.01
3 or more	0	0	NA	0.2	0.0	NA	2	4	.12	0	2	<.01	8	7	.98	1	3	.12

Survey years in column headings represent the midpoint of data collection years for each of the two NSFG surveys (2006–2010 and 2013–2015). We report in text characteristics for which method use changed significantly at $p < .01$.

NA, not available. Due to small cell sizes, we did not test for differences between years.

During the time period covered by these data, the ACA was phased into implementation (in 2013), which included a provision for full coverage of all female-controlled contraceptive methods with no cost-sharing. Studies have produced mixed evidence regarding the relationship between the implementation of the ACA and contraceptive use patterns [24–27]. The role that the contraceptive coverage guarantee played in impacting use of contraception at the national level

remains unclear, as there was no significant increase in the use of methods that would have been covered under the ACA (most or moderately effective methods) during the most recent time period (2012–2014) excepting small increases in implant use. Prior to the implementation of the ACA, many women were able to access contraceptive methods at low or no cost through publicly funded family planning centers and Medicaid; existence of these safety net programs may have

Table 3

Among current female contraceptive users ages 15–44, adjusted odds ratios from logistic regression assessing associations between user characteristics and use of individual methods, 2014

	Female sterilization		Male sterilization		IUD		Implant		Withdrawal		Natural family planning	
	aOR	p value	aOR	p value	aOR	p value	aOR	p value	aOR	p value	aOR	p value
Age												
15–24	Ref		Ref		Ref		Ref		Ref		Ref	
25–34	7.8	<.01	2.8	.24	0.8	.41	0.3	<.01	1.3	.25	3.8	.01
35–44	23.0	<.01	9.2	<.01	0.4	<.01	0.0	<.01	1.5	.12	5.0	<.01
Race/ethnicity												
White, non-Hispanic	Ref		Ref		Ref		Ref		Ref		Ref	
Black, non-Hispanic	0.9	.78	0.5	.08	1.0	.95	1.2	.63	1.0	.99	1.0	.94
Other or multiple races, non-Hispanic	1.0	.96	1.4	.53	0.9	.68	1.7	.27	1.0	.97	1.6	.43
Hispanic	0.7	.08	1.1	.83	1.4	.11	1.1	.86	0.8	.31	0.4	.08
Poverty status												
<100% federal poverty level	Ref		Ref		Ref		Ref		Ref		Ref	
100%–199%	0.6	<.01	3.7	<.01	1.0	.91	0.7	.26	1.5	.10	0.4	.17
200%–299%	0.6	.10	4.3	<.01	1.0	.86	1.4	.54	1.6	.12	1.1	.90
300% or higher	0.4	<.01	6.1	<.01	0.9	.47	1.4	.48	2.3	<.01	0.7	.63
Born outside the United States												
No	Ref		Ref		–		–		Ref		–	
Yes	0.6	.02	0.3	.01	–		–		2.5	<.01	–	
Relationship status												
Married	–		Ref		–		–		Ref		Ref	
Cohabiting	–		0.4	<.01	–		–		1.8	<.01	0.4	.15
Not married or cohabitating	–		0.4	<.01	–		–		0.7	.17	0.3	.01
Education												
No high school diploma	Ref		–		Ref		Ref		Ref		–	
High school or GED	0.8	.28	–		1.1	.75	0.6	.24	2.8	<.01	–	
Some college	0.6	.03	–		2.2	<.01	0.4	.12	1.9	.06	–	
College graduate	0.3	<.01	–		2.0	.03	0.2	.03	1.4	.30	–	
Insurance coverage												
No	–		–		–		Ref		–		–	
Yes (private, Medicaid, other)	–		–		–		0.5	.08	–		–	
Parity												
0	Ref		Ref		Ref		Ref		–		–	
1–2	8.2	<.01	2.1	.03	4.5	<.01	2.4	.01	–		–	
3 or more	23.6	<.01	2.2	.05	2.6	<.01	1.6	.53	–		–	
Number of future births expected												
0	–		–		Ref		–		Ref		Ref	
1–2	–		–		0.9	.63	–		2.1	<.01	2.6	.04
3 or more	–		–		0.4	.05	–		1.8	.18	6.1	<.01

The year 2014 represents the midpoint of the data collection years for the 2013–2015 NSFG survey. Each model began with all independent variables presented in Table 2; after each iteration of a backward stepwise elimination process, we conducted Wald tests for each independent variable at $p > .1$ in the full model to determine if its inclusion affected the model. If the Wald test was not significant at $p < .05$, the variable was omitted from the model. All multivariable models included age, race/ethnicity and poverty status regardless of significance due to their theoretical relevance to the models. Age categories were consolidated for the multivariable models due to insufficiently large cell sizes. We report in text characteristics associated with method use in 2014 that are significant at $p < .01$. aOR, adjusted odds ratio.

dampened any impact that the ACA could have had on contraceptive use [28]. In addition, cost is not the only barrier to accessing a full range of method options; for example, women who consistently use options not covered by the contraceptive coverage guarantee — like condoms and withdrawal — may be satisfied with their choice and not want to switch to a form of contraception that requires a health care visit.

We found patterns in the characteristics of users of specific methods in 2014. When all other user characteristics were taken into account, income was associated only with increased use of male sterilization and withdrawal and decreased use of female sterilization. It is noteworthy that an

opposite pattern occurs between users of female sterilization versus those who rely on their partner's sterilization in terms of income levels; factors at the systems, provider and patient levels all likely contribute to this marked difference [29]. The fact that income is not associated with use of most other methods obtained through health care settings may reflect broader access to affordable and/or free contraception made possible through programs such as Title X [24].

Several limitations are inherent in the analysis of cross-sectional data. Associations observed between respondent characteristics and contraceptive method use do not necessarily imply a causal relationship. Of note, contraceptive method use in our analysis represents the most effective

method reported. As such, use of more than one method is not captured in this analysis, despite recent evidence indicating small increases in the use of multiple methods [30,31], and less effective methods that may be used in conjunction with more effective methods, such as condom and withdrawal, may be underrepresented. Finally, demographics of the overall population may have changed over the time period covered in these analyses; given associations between some key demographic characteristics and use of certain methods, changes in the profiles of method users may reflect, in part, underlying changes in population demographics.

The extent to which the recent declines in unintended pregnancy will continue is unclear and will be at least partially dependent upon access to and use of effective contraception. We continue to document no change in the overall use of contraception among women at risk for unintended pregnancy, a population who could potentially reap some of the greatest benefits in reductions in unintended pregnancy through uptake of contraception. Because women's primary reasons for not using contraception are not method specific (such as not thinking that they could become pregnant and not minding if they did become pregnant [21]), efforts to support women at risk of unintended pregnancy should be comprehensive in scope, as focusing too narrowly on the uptake of any one particular method may be a disservice to women. Importantly, findings highlighting differences in the profiles of users by method underscore the importance of ensuring full access, i.e., with no cost barriers as through the ACA, to the broad range of methods available. However, expectations of reduced federal support for family planning services through funding programs and through repeal of the ACA leave recent sexual and reproductive health gains in question. Women use different contraceptive methods at different times during their reproductive years, and their choice of method is determined by a variety of factors [19]. Ensuring that women can select a method based solely on characteristics that they personally prioritize rather than external factors that may influence choice of a particular method over another is a key tenet of women-centered reproductive health care. Use of contraception is a key driver of a diverse set of positive outcomes for women's health and socioeconomic well-being, and ensuring access for all women to the full range of contraceptive methods is high priority to sustain these positive outcomes.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.contraception.2017.10.003>.

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